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Division of Communicable Disease Control  
California Department of Public Health  
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*Oropsylla montana*, a common flea of ground squirrels in California and the primary vector for plague

## California Plague Report, Summer 2012

The California Department of Public Health (CDPH) collaborates with local, state, and federal agencies to conduct a statewide plague surveillance program. The CDPH, Vector-Borne Disease Section (VBDS) collects, collates, and analyzes information on suspect and confirmed plague activity among humans, domestic pets, and wild animals throughout California. This mid-year report summarizes plague surveillance in California through July 31, 2012.

### Human surveillance

No cases of plague in humans have been detected through July, 2012.

### Domestic pets

No cases of plague in domestic pets have been detected through July, 2012.

### Wild animals

Between January 1, and July 31, 2012, VBDS plague surveillance received test results for 197 wild rodents and 111 carnivores from 21 California counties (see Table 1). The 197 rodents totaled: 113 California ground squirrels (*Otospermophilus beecheyi*) from five counties, 39 chipmunks (*Tamias* spp.) from four counties, 21 mice (*Peromyscus* spp.) from three counties, 2 golden-mantled ground squirrels (*Callospermophilus lateralis*) from two counties, 14 Belding's ground squirrels (*Uroditellus beldingi*),

6 antelope ground squirrels (*Ammospermophilus leucurus*), one Douglas's pine squirrel (*Tamiasciurus douglasii*) and one big-eared wood rat (*Neotoma macrotis*). Evidence of plague activity was detected on June 13, 2012, at Four Jeffrey campground, Inyo County; two California ground squirrels and two Belding's ground squirrels tested positive for antibodies to *Yersinia pestis* (titers 1:64, 1:128, 1:64 and 1:32, respectively). All other rodents were negative for plague antibody.

The 111 carnivores tested included: 98 coyotes (*Canis latrans*) from ten counties, 5 black bears (*Ursus americanus*) from five counties, 4 bobcats (*Lynx rufus*) from two counties, 2 red foxes (*Vulpes vulpes*) from one county, one mountain lion (*Felis concolor*), and one raccoon (*Procyon lotor*). All carnivores were negative for serum antibody to *Y. pestis*. Additionally, 2 feral pigs (*Sus scrofa*) from one county tested negative.

Results above do not include data from plague surveillance programs of local agencies that conduct their own testing.

On April 12, 2012, San Diego County Environmental Health, conducting routine disease monitoring at Palomar Mountain State Park, Cedar Grove Group Camp, found antibody evidence of plague activity (titer 1:1024) in a California ground squirrel (Chris Conlan: County of San Diego, Department of Environmental Health, May 3, press release: [http://www.sdcounty.ca.gov/deh/pests/pdf/Plague\\_press\\_release\\_5-3-12\\_final.pdf](http://www.sdcounty.ca.gov/deh/pests/pdf/Plague_press_release_5-3-12_final.pdf)).

#### *Plague activity elsewhere in the United States:*

The first US human case of plague in 2012 was reported in a resident of Torrance County, New Mexico. (New Mexico Department of Health, May 31 press release: [http://www.health.state.nm.us/CommunicationsOffice/2012 News Releases/NewsRelease-20120531-PlagueFirstCase-EN.pdf](http://www.health.state.nm.us/CommunicationsOffice/2012%20NewsReleases/NewsRelease-20120531-PlagueFirstCase-EN.pdf)

In June, New Mexico health officials reported a domestic cat from Taos contracted plague after hunting rodents in a local park. A second domestic cat from the same area was also reported with signs consistent with plague (New Mexico Department of Health, June 13, press release: <http://www.health.state.nm.us/CommunicationsOffice/2012%20News%20Releases/NewsRelease-20120613-PlagueTaosCat-EN.pdf>).

On June 2, 2012 a 59 year-old Crook County, Oregon resident contracted plague after attempting to clear a rodent from a choking domestic cat. Several days later the man was hospitalized with symptoms of bubonic/septicemic plague where his condition became critical (Teresa Carson, Reuters.com). Although family members were initially told by medical officials he had a 30% chance for survival, he survived, stabilized and is currently recovering <http://www.promedmail.org/direct.php?id=20120612.1165863>, <http://www.dailypress.com/news/national/la-na-nn-plague-oregon-20120718.0.7748227.story>.

Jefferson County, Colorado public health officials received confirmation on June 12 that a tree squirrel from the Idledale area tested positive for plague.

**Table 1. VBDS plague surveillance results through July 2012**

County Location	No. rodents	No. carnivores	Positive specimens		
			Species	Result	Month
<b>Calaveras</b>	1				
<b>Inyo</b>	23				
Inyo NF: Four Jeffrey Campground			CA G Sq	1:64	June
Inyo NF: Four Jeffrey Campground			CA G Sq	1:128	June
Inyo NF: Four Jeffrey Campground			BE G Sq	1:64	June
Inyo NF: Four Jeffrey Campground			BE G Sq	1:32	June
<b>Kern</b>		11			
<b>Lake</b>		1			
<b>Lassen</b>	1				
<b>Los Angeles</b>		1			
<b>Mendocino</b>		7			
<b>Modoc</b>	10	19			
<b>Mono</b>	27	1			
<b>Monterey</b>		4			
<b>Napa</b>		8			
<b>Plumas</b>	7				
<b>Riverside</b>	36				
<b>San Benito</b>		45			
<b>San Bernardino</b>	64				
<b>San Diego</b>	25				
<b>San Luis Obispo</b>		6			
<b>Santa Barbara</b>		1			
<b>Sierra</b>	1				
<b>Siskiyou</b>		7			
<b>Stanislaus</b>	2				
<b>Total</b>	197	111			

CA G Sq: California ground squirrel

BE G Sq: Belding's ground squirrel

(Jefferson County Public Health, June 12, press release: [http://jeffco.us/news/news\\_item\\_T3\\_R2625.htm](http://jeffco.us/news/news_item_T3_R2625.htm)).

#### *Worldwide plague activity, 2012:*

Plague has a long history of extensive human morbidity and mortality in many regions of Africa <http://www.promedmail.org/direct.php?id=20120214.1041629>. These areas are often remote, impoverished and experience significant political upheaval that thwarts the efforts of public health authorities trying to prevent and control diseases like plague. Health officials of the Uganda: Vurra County, Arua District reported two people died from a suspected outbreak of plague early in 2012 <http://allafrica.com/stories/201202080058.html>. Africa still accounts for most of the world's plague deaths and most of those are from Madagascar <http://www.gideononline.com/tag/plague/>.

